

Amendments to the Specification:

Please replace paragraph beginning at page 9, line 7 with the following amended paragraph:

As seen in FIG. 1, a pipeline 3 of natural gas is coupled to a gas line 7 which includes a regulator 11 for reducing the gas pressure within the gas line. From the regulator, the gas line enters a sampling shelter 15 that houses a plurality of sensors 19 (with at least one being an optical gas sensor as the present invention may be utilized in parallel with the chemical sensors described above). If multiple sensors are employed, they are connected in parallel to the gas line so that gas flow can be simultaneously directed to all of the sensors. This is accomplished after the gas line enters the sampling shelter by diverting gas into a plurality of feed lines 27 ~~34~~ at juncture 23. Each of the feed lines are in turn coupled to a sensor and are controlled by a valve 31 ~~27~~ to further restrict the flow of natural gas. Preferably, the gas line and the feed lines are made from stainless steel and have outer diameters of 0.25 inches.

Please replace paragraph beginning at page 9, line 18 with the following amended paragraph:

As seen in FIG. 5, a gas sensor 500 which is incorporated into the sampling shelter 15, includes an inlet 503, an outlet 507, and a light chamber 511, all of which are affixed within an optical gas sensor casing ~~515~~ (not shown) through a series of support flanges 517. The casing is configured to house a laser light source 519, an InGaAs detector 523 adjacent to the light source 519 ~~523~~, a window coupling the laser light source and the detector to the light chamber, a mirror 527 opposite the laser light source 519 ~~527~~, and processing electronics 531. The mirror is positioned preferably in such a manner to reflect light emitted from the light source through the light chamber and the window onto the detector. In one embodiment, the light source is positioned at 5 degrees from horizontal and the mirror is 40 cm from the light source. Preferably, the laser light source is a tunable diode laser or a VCSEL laser configured to emit light either in the 1.877-1.901 .mu.m wavelength range or within the ranges of 920 nm-960 nm or 2.711-2.786 .mu.m. In one embodiment, the processing electronics includes a 16-bit Motorola

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Page : 3 of 13

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microcontroller to convert the signals received by the detector into lbs per measured million cubic feet of methane (1 lb water/mmscf=21 ppm).